

**REMARKS**

The following remarks are being submitted as a full and complete response thereto. Claims 1-4, 6, 7, 10-18, 21-22 and 24-29 are pending. By this Amendment, Claims 1 and 14 have been amended and Claims 30-33 have been added. Support for the amendments to the claims may be found at least in the second and third paragraphs of page 5, the first paragraph of page 7, and the third full paragraph of page 9 of the application as originally filed. The Applicants respectfully submit that no new subject matter is presented herein.

**Claim Rejection -- 35 U.S.C. §103**

Claims 1-2, 7, 10 & 28 are rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 4,850,288 to Hoffert et al. (Hoffert) in view of US Patent No. 5,326,254 to Munk; Claims 3-4, 6, 12-13 & 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hoffert in view of Munk, and further in view of US Patent No. 6,848,375 to Kasin; Claim 11 is rejected under 35 U.S.C. §103(a) as being unpatentable over Hoffert in view of Munk as applied to Claims 1-2 above, and further in view of US Patent No. 4,022,591 to Staudinger; Claims 14, 16, 18 21-22 & 28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hoffert in view of Munk, and further in view of US Patent No. 6, 883, 443 to Rettig et al (Rettig); Claim 15 is rejected under 35 U.S.C. §103(a) as being unpatentable over Hoffert in view of US Patent No. 6, 145, 452 to Heger et al. (Heger); Claims 17 & 27 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hoffert in view of Munk as applied to claim 16 above, and further in view of Kasin; and Claims 24-26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hoffert in view of Staudinger. To the extent the

rejections may apply to the claims as amended, the Applicants respectfully traverse the rejections for at least the following reasons.

Claim 1 recites a method for the treatment of materials, in particular waste materials and refuse, that includes supplying the material to be treated and a combustion supporter to an oxidation chamber or a combustion reactor, wherein the combustion supporter consists essentially of oxygen and recycled gases, and discharging gases produced during the oxidation or combustion of the material from the oxidation chamber or combustion reactor, wherein the material to be treated and the products resulting from the oxidation or combustion are subjected to conditions of isothermy or quasi-isothermy at high or very high temperature, without substantial oxygen deficit, in any part of the chamber or reactor, wherein the oxidation chamber or combustion reactor is operated at a pressure from greater than atmospheric pressure to 600 kPa, wherein water is injected into the recycled gases to raise the concentration of water in the recycled gases to higher than 30% by volume, and wherein at the mouth of the reactor the produced combustion fumes show a very low TOC and a negligible volatile ash content.

The combination of features in Claim 1 provide the unexpected and surprising results that in an oxy-combustion process, the premixing of oxygen (pure or technical oxygen) with recycled gases or water in a combustor operating under pressurized conditions and high temperatures provide for a combustor to operate under isothermal or quasi-isothermal conditions. These isothermal or quasi-isothermal conditions thus allow a flue gas (combustion fume) with a very low TOC and negligible amounts of fly ash. As described in the Specification of the present invention, the unexpected and

surprising results produced by the method of Claim 1 may be a result of the nitrogen and oxygen (air comburent) being transparent to infrared radiation, wherein in an oxy-combustion process, the addition to oxygen of opaque gases, such as CO<sub>2</sub> and H<sub>2</sub>O (recycled gases (fumes) and/or water), before entering the combustor, imparts to the oxygen a capability to undergo instantaneous heating through infrared absorption from the combustor walls and combustion fumes.

The Applicants respectfully submit that Hoffert and Munk, alone or in combination, do not teach or suggest the combination features of Claim 1. Hoffert discloses a combustion process wherein a high turbulence is created by providing a tangential injection of both air and solid fuels (col. 3, lines 46 to 63). Hoffert teaches that the fumes at the outlet of the combustor are clean for they contain a very small concentration of incombustible particulate solids (fly ashes) and that the particulate solids may optionally be passed through a cyclone type separator for a substantially complete removal of such fine solids (col. 11, lines 33-38).

The Applicants respectfully submit that, with respect to the incombustible ashes at the outlet, when the combustible contains, e.g., 5-30% by weight of incombustible ashes, as is common with coals, Hoffert does not provide any elimination of the incombustible ashes (either solid or liquid) in the combustor. Thus, all of the incoming incombustible ashes along with the combustible are bound to come out from the combustor with the exiting fumes, which is a consequence of the material balance valid in any industrial plant. Hoffert is left to reduce such fine incombustible solids, when present, with a cyclone. However, it is well known in the art that even top performing cyclones can set a "cutting size" of around 15-20 micrometers. Therefore, the flue

gases of Hoffert contain at least all of the incombustible particles having a size lower than these values. Thus, Hoffert cannot produce a negligible value of residual incombustible ashes.

On the contrary, the combination of features of Claim 1 does not require any turbulence of the inlet materials (oxygen and combustibles) and, above all, the combustor provides a separation of liquefied incombustible ashes at its bottom. It is the combination of features of Claim 1 that unexpectedly and surprisingly reduces the incombustible ashes to a negligible amount. In fact, it has been unexpectedly and surprisingly found that, operating with the combination of features of Claim 1 results in the segregation of incombustible ashes in liquid form in the combustor, which is an efficient tool for reducing the fly ashes in the flue gases to a negligible value. Hoffert, in its optional use of the cyclone, does not even consider the elimination of incombustible ashes having an average size diameter lower than about 15-20 micrometers. It is well known that damage to an individual's health can be caused by particles have a particle size of less than 10 micrometers, and even less than 2.5 micrometers. By operating the combustor of the present invention at isothermal or quasi-isothermal conditions, as recited in Claim 1, the non-combusted volatile material is eliminated from the fumes, as evidenced by the very low TOC comprising between less than 1 ppm and 10 ppm, the amount depending on the starting fuel. Hoffert does not even mention, let alone teach or suggest, the TOC content in the flue gases for the simple reason that Hoffert is not directed whatsoever to solving the technical problem of TOC content in the flue gases. The Applicants thus submit that, contrary to the assertions of the Office Action, one of ordinary skill in the art would not be motivated to modify Hoffert in order to arrive at the

features of Claim 1, for doing so would require using a combustor without the use of tangential injection of oxygen and fuel, the essential feature of Hoffert.

As noted above, the essential feature of Hoffert is that the materials to be treated and air are supplied into the burner primary combustion chamber at a certain tangential velocity. Multiple tangential inlet openings or tuyeres are provided to supply combustion air (col. 5, lines 61-66; col. 6, lines 11-14) and at the exit of the burner where the flue gases are discharged there is a choke element to prolong the solids residence time for substantially complete combustion (col. 6, lines 48-50). As affirmed in the Office Action, Hoffert, at Col. 4, lines 21-23, is not disclosing the temperature of the combustor but, rather, the temperature of the effluent gases. However, contrary to the assertions in the Office Action, Hoffert does not teach or suggest that a condition of isothermy or quasi-isothermy exists in the reactor. Moreover, the Office Action asserts that the Abstract of Hoffert teaches that the fly ashes are reduced to a negligible value. The Applicants respectfully submit that Hoffert does not indicate where the incombustible materials go. As shown in Fig. 1 of Hoffert, the incombustible materials travel with the flue gas. As stated in Col. 4, lines 27-33, no solid separation is described and all of the incombustible materials are still found in the combusted fumes. Therefore, the Applicants submit that Hoffert does not teach or suggest that the amount of fly ashes in the combustion fumes are reduced to a negligible value (see also Col. 11, lines 33-37, confirming that the aforementioned conclusion), as recited in Claim 1.

With respect to the Office Action's assertion that the "Applicant states in paragraph 3, page 14 that a temperature of about 1500° C is sufficient to turn any non-combustibles into slag," the Applicants submit that the statement is true when using the

method of Claim 1. However, the temperatures referred to by the Office Action as being disclosed by Hoffert, namely 2700° F - 2800° F at Col. 12, lines 53-57, relate to the temperature of the effluent gases, not to the temperatures inside the combustor. Thus, the Examiner is reading into Hoffert a feature that is not disclosed. Hoffert does not teach or suggest the combination of features recited in Claim 1 and, in particular, a combustor capable of reducing the TOC to a very low value and the fly ashes to a negligible amount. Furthermore, the Applicants submit that the written disclosure of the present invention provides ample support for these features, as recited in Claim 1, such that one of ordinary skill in the art would understand that the combination of the features of Claim 1 can reduce the TOC to less than 10 ppm when carbon, for example, is used as fuel. Moreover, the Applicants submit herein the Declaration under 37 C.F.R. §1.132 of Massimo Malavasi as additional support and to refute the Office Action's assertion that low TOC on the order of parts per million (ppm) is inherent. The Applicants are not aware of any plant in the world, or of any prior patent or publication that teaches or suggests the very low TOC amount, as recited in Claim 1 and as shown in the results of the test completed by Mr. Malavasi.

The Office Action admits that Hoffert does not teach or suggest recycled gases being supplied to the combustion reactor or water being injected into the recycled gases to raise the concentration of water in the recycled gases. The Office Action asserts Munk cures the deficiencies of Hoffert. The Applicants respectfully disagree.

Munk teaches a combustor wherein recycled fumes containing additional water are injected into the combustor either alone or in admixture with the comburent. Munk is directed to the problem of reducing the NOx in the flue gases and teaches adding

water to the recycled gases to accomplish this goal. However, Munk does not even mention TOC or fly ashes in the flue gas, let alone teach or suggest a very low TOC and a negligible amount of fly ashes in the flue gas. Munk, in the background section, states that "[t]he prior art literature indicates that flue gas recirculation acts as a flame quencher, reducing combustion temperatures by thermal dilution. In doing so, among other indicated advantages, it significantly reduces excess air requirement, flame temperature, and flue gas heat loss, thereby reducing NO<sub>x</sub> emissions and improving boiler efficiency . . . , increase the recirculation fraction when NO<sub>x</sub> emissions increase, and reduce the recirculation fraction when NO<sub>x</sub> emissions decrease." Although existing flue gas recirculation techniques are useful in reducing noxious emissions and improving boiler efficiency, these techniques have limitations. For example, although noxious emissions tends to decrease as the fraction of recirculated flue gas is increased, there is a limit on the fraction of recirculated flue gas that can be fed back to the burner input. The upper limit is approximately 25% recirculation. Above this level, the burner flame tends to become unstable, which can severely limit the efficiency of the burner. Accordingly, further reductions in noxious emissions that might result from higher percentage flue gas recirculation generally cannot be achieved. As noted in Col. 1, lines 29-60, an object of Munk is to "attain further reduction in noxious emissions without undue sacrifice of flame stability and/or burner efficiency." Munk does this by adding water for humidifying recycled fumes. Munk is completely silent as to the technical problems solved by the present invention as claimed, namely the reduction of TOC to very low values and negligible amounts of fly ashes in the flue gas. Thus, it would not be obvious of one of ordinary skill in the art to modify Hoffert according to the

teachings of Munk, as both Hoffert and Munk do not teach or suggest at least the combination of the features of Claim 1.

The Applicants respectfully submit that the rejection is clearly based on hindsight, as one of ordinary skill in the art would never find it obvious to combine the features of Hoffert and Munk, as asserted, for neither reference provides even a pallid hint that the combination would produce the results to resolve the technical problem of the present invention, as embodied by the combination of features of Claim 1. In fact, the Applicants submit that Hoffert actually teaches away from the features of Claim 1. Hoffert states that "[t]he addition of combustion air tangentially along the length of the combustion chamber also provides an additional benefit to the mechanical integrity of the burner by buffering and tempering the surface of the heat resistant refractory insulation material lining the interior of the burner chamber from the very hot products of combustion. This air addition prevents the insulation surface from reaching reaction temperatures which would be deleterious to the insulation. This air sweep is enhanced by the design and installation of the air inlet tuyeres." See Col. 3, lines 7-16 of Hoffert. Hoffert explicitly teaches creating cold zones in the combustor and, therefore, the combustor is not working under isothermic or quasi-isothermic conditions. The Office Action's assertion that Hoffert discloses isothermic or quasi-isothermic conditions is incorrect. Furthermore, Munk does not cure the deficiencies noted with Hoffert. In fact, Munk also teaches away from the features of Claim 1. As noted above, Munk states that "the prior art literature indicates that flue gas recirculation acts as a flame quencher, reducing combustion temperatures." Thus, Munk also teaches creating cold zones and lower temperatures when the recycled gas is injected into the combustor. Thus, it



would not be obvious to one skilled in the art to combine Hoffert and Munk as asserted, for both teach away from an isothermal or quasi-isothermal reactor operating at high temperatures for melting ashes. Furthermore, one of ordinary skill in the art would recognize that oxygen or technical oxygen, as recited in Claim 1, is required to reach isothermal or quasi-isothermal conditions, rather than simply air, as asserted by the Office Action in the rejection based on the cited references. Thus, the Applicants submit that it would not be obvious to one of ordinary skill in the art to modify Hoffert according to the teachings of Munk, for Hoffert and Munk do not teach or suggest, and actually teach away from, the combination of features recited in Claim 1.

With respect to the Office Action assertion that it would have been obvious to have the concentration of water in the recycled gases higher than 30% by volume because it has been held that discovering an optimum value of a result effective variable only involves routine skill in the art, the Applicants respectfully disagree. The premise relied on by the Office Action requires that the result effective variable be effective in solving the technical problem of the present invention. Hoffert and/or Munk do not teach or suggest a water percentage higher than 30% by volume in the flue gas. Moreover, nowhere in either reference does it indicate that the claimed water percentage would be obvious, in combination with all of the other features of Claim 1, to solve the technical problem of the present invention, i.e., to reduce the TOC to a very low level and to have negligible amounts of fly ashes in the flue gas. Once again, please refer to Mr. Malavasi's inventor's Declaration for a clear example of a test indicating the results of the combination of features of Claim 1 toward achieving the intended goal of the present invention.

For at least the reasons provided above, the Applicants respectfully submit that Hoffert and Munk, alone or in combination fail to teach or suggest, and teach away from, the combination of features in Claim 1. Accordingly, the Applicants respectfully submit that Claim 1 is allowable over Hoffert and Munk.

With respect to dependent Claims 2 and 7, the Office Action on page 5 further asserts that Munk "teaches the supply of a combustion supporter comprising oxygen mixed with gases resulting from the combustion, with water, or with a combination of gases and water, to bring about a high degree of opacification of the combustion supporter and to ensure almost instantaneous heating of the combustion supporter that is supplied to the reactor (Col. 2, lines 60-67)." The Applicants submit that the cited section of Munk does not teach or suggest anything at all to do with opacification. Rather, the Examiner is clearly reading into Munk what is disclosed in the present application. The opacification feature of Claim 2, for example, and as disclosed in the Specification of the present application, is only realized because of the combination of features of Claim 1 and, as such, is not disclosed in the cited references.

The Office Action has also stated that "it is well-known in the art, and applicant admits on page 5 of the specification, that the addition of water or steam to the products of combustion renders them opaque to infrared, wherein the recycled gases which ensure thermal balance are constituted wholly or partially by steam (Col. 1, line 66 – Col. 2, line 8)." Again, these statements are disclosed only in the Specification of the present application, and nothing of this kind can be read into the cited passage of Munk. The Applicants point out that the assertion on page 5 of the Office Action does not, per se, indicate that one of ordinary skill in the art would have reached the solution to the

technical problem of the present invention. As stressed herein, it is the combination of the features of Claim 1, including wherein water is injected into the recycled gases to raise the concentration of water in the recycled gases to higher than 30% by volume, that renders the specific result alluded to in the Office Action. Thus, the Applicants respectfully request that any future action indicate where in the cited references support for these conclusory assertions lies, rather than simply passing off the Applicants' own disclosure as pertaining to that of the applied references. The Applicants respectfully submit that this is evidence of hindsight being used in the application of the cited references and that the rejection is based on the Examiner's own conclusory opinions rather than on any actual teaching of applicable prior art.

With respect to Claims 3-4 and 29, the Office Action states that the features of these claims are found in Kasin and cites Col. 4, lines 38-40 and Col. 8, lines 48-54, of Kasin for support. The Office Action states that "[i]t would have been obvious for one skilled in the art at the time of invention to combine the combustion apparatus of '288 as combined with '254 with the flue gas recycled percentages of '375 because such a combination would have produced the added benefit of the optimal amount of exhaust gas recycled without unacceptably reducing the performance of the combustion apparatus." The Applicants respectfully submit that Kasin does not cure the deficiencies noted above with respect to Hoffert and Munk. As such, the Applicants respectfully submit that the combination of Hoffert, Munk and Kasin, alone or in combination, does not teach or suggest the features of Claim 1 and fails to provide for one of ordinary skill in the art to solve the technical problem of the present invention.

With respect to Claims 12 and 13, the Office Action cites Col. 12, lines 14-20 of Kasin for the MIMO control. The Applicants submit that Kasin does not teach or suggest the recited feed forward control in the cited section. Moreover, the Office Action provides the following reason for a finding of obviousness: "it would have been obvious for one skilled in the art at the time of the invention to combine the combustion apparatus of '288 with '254 and with the combustion data controller of '375 because such a combination would have produced the added benefit of an automated combustion process with ideal combustion conditions to maximize efficiency and reduce the creation of pollutants. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a response time of about 2 seconds, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art." The argument is once again based upon hindsight. As such, the Applicants respectfully submit that the combination of Hoffert, Munk and Kasin, alone or in combination, does not teach or suggest the combination of features of Claim 1 and fails to provide for one of ordinary skill in the art to solve the technical problem of the present invention.

With respect to Claim 11, the Office Action admits that Hoffert and Munk do not teach or suggest the fused slag being cooled and solidified into beads so as to ensure that toxic heavy metals contained in the incombustible slag are rendered completely inert. The Office Action asserts that Staudinger, Col. 2, lines 48-53, teaches the feature and states that "[i]t would have been obvious for one skilled in the art at the time of the invention to combine the combustion apparatus of '254 as combined with '288 with the slag quencher of '591 because such a combination would have produced the added

benefit of a means for disposing the liquid slag present in the combustion chamber in a safe and environmentally friendly way and would also have added benefit of replacing the clean-out tube (17a, mistakenly as 7a in Fig. 1) of '288 with a completely sealed quench chamber which would prevent potentially dangerous splashing of the liquid slag to occur." The Office Action thus modifies Hoffert by replacing the clean-out tube 17a in Fig. 1 of Hoffert with the slag quencher of Staudinger. The Applicants respectfully submit that Hoffert, on the contrary, melts the incombustible materials in the combustor (first combustion chamber) and then uses the second combustion chamber to solidify the incombustible material. Once again, hindsight is being used in asserting the combination of Hoffert, Munk, and Staudinger. The Applicants respectfully submit that one skilled in the art would not be motivated to modify a combined Hoffert and Munk according to the teachings of Staudinger, for doing so would not provide a solution to the technical problems of the present invention, as described above with respect to Claim 1. Staudinger does not teach or suggest anywhere that the melting of the incombustible ashes are removed almost completely in the quench chamber. Moreover, the Office Action does not indicate where in the disclosure of Staudinger that incombustible ashes are present in the flue gases in negligible amounts. For at least the reasons provided above, the Applicants submit that Hoffert, Munk and Staudinger fail to teach or suggest the combination of features of Claim 1 and, in particular, the feature of a very low TOC content and a negligible amount of fly ashes in combustion fumes.

Claim 14 recites an apparatus for the treatment of materials, in particular waste materials and refuse, that includes the same or substantially similar features as argued above with respect to Claim 1. Accordingly, the Applicants respectfully submit that Claim 14 is allowable over Hoffert and Munk for the same reasons presented above with respect to Claim 1.

The Office Action in section 22, beginning on page 10, states that asserts that Rettig cures a deficiency of Hoffert by teaching the use of recirculating flue gas as a quench gas (Col. 5, line 65 – Col. 6, line 11). The office Action states that it would have been "...obvious for one skilled in the art at the time of the invention to combine the combustion gas quenching means of '288 with the use of recirculated flue gas as the quench gas of '443 because such a combination would have produced the added benefit of an efficient and readily available means of reducing the temperature of the combustion gases to a useable level with the added benefit of not diluting or increasing the volume of the flue gases." The Applicants respectfully submit that once again, one skilled in the art would not look to modify the combination of Hoffert and Munk according to the teachings of Rettig, for doing so would not provide the solution of the technical problem of the present invention, as claimed. The Applicants respectfully submit that Hoffert, Munk and Rettig, alone or in combination, fail to teach or suggest the combination of features of Claim 1 and, in particular, the feature of a very low TOC content and a negligible amount of fly ashes in combustion fumes.

With respect to Claims 16 and 18, the Office Action cites Col. 8, lines 1-5, in Hoffert and Col. 2, lines 60-67, in Munk. Moreover, the Office Action indicates that the gas is opaque to infra-red as admitted by the Applicant on page 5 of the specification as

known and that "it would have been obvious for one skilled in the art at the time of invention to combine the combustion apparatus of '288 with the flue gas recirculation of '254 because such a combination would have produced the added benefit of reduced NOx emissions and increased opacity to infrared, which is known to increase the overall efficiency of the combustion system." As indicated above, the feature asserted by the Examiner does not add anything to the fact that combustor resulting from the combination of Hoffert and Munk is not isothermal or quasi-isothermal. Furthermore, the rejection of Claim 16 over the combination of Hoffer and Munk in view of Kasin also relies on hindsight. The Office Action states that it would have been obvious to combine the combustion apparatus of '288 as combined with '254 with the control system of '375 because such a combination would have produced the added benefit of an automated combustion process with ideal combustion conditions to maximize efficiency and reduce the creation of pollutants. The Office Action alludes to the control system reducing the creation of pollutants. The Applicants respectfully submit that only the combination of features in Claims 1 and 14 results in the claimed reduction in pollutants, not the control system. Furthermore, the Office Action does not provide any support in the cited references for the conclusory statements.

With respect to Claims 24-26, which are rejected as being unpatentable over Hoffert in view of Staudinger, the Office Action cites certain passages of Staudinger wherein it is described the collection of fluid slags (Col. 3, lines 25-38). The Applicants respectfully disagree. Staudinger does not teach or suggest that it is possible to reduce to a negligible amount the fly ashes in combustion fumes. It is the combination of features of Claims 1 and 14 which surprisingly and unexpectedly allow wherein

collecting fluid slags at the bottom of the reactor and fly ashes in the fumes are present in negligible amounts when the combustor is operated. As stated above, the added benefits indicated in the Office Action are only based on an ex post facto analysis and hindsight of the cited references in view of the present application.

Accordingly, for at least the reason(s) provided above, the Applicants respectfully submit that Hoffert, Munk, Kasin, Staudinger, Rettig, and Heger, alone or by any combination, do not disclose, teach or suggest, and teach away from, the features of the present invention, as recited by Claims 1 and 14. As such, the Applicants respectfully submit that one of ordinary skill in the art would not find it obvious to modify Hoffert according to the teachings of Munk, Kasin, Staudinger, Rettig, and Heger, alone or in any combination, because to do so would not arrive at the invention recited by Claims 1 and 14, respectively. Moreover, the obviousness rejections raised by the Office Action are based on hindsight, for one of ordinary skill in the art would never combine the references as asserted, for doing so does not solve the technical problem solve by the combination of features of Claims 1 and 14, namely a low TOC content and a negligible amount of fly ashes in the combustion fumes. The Applicants have found the unexpected and surprising results after long and expensive research, wherein operating in accordance with the features of Claims 1 and 14 it is possible to operate a combustor under isothermal or quasi-isothermal conditions (see, e.g., Mr. Malavasi's Declaration). Accordingly, the Applicants submit that Claims 1 and 14 should be deemed allowable over Hoffert, Munk, Kasin, Staudinger, Rettig, and Heger.

Claims 2-4, 6, 7, 10-13, 28 and 29 depend from Claim 1; and Claims 15-18, 21, 22, and 24-27 depend from Claim 14. Accordingly, the Applicants respectfully submit



that these dependent claims should be deemed allowable for the same reasons that Claim 1 and 14, respectively, are allowable, as well as for the subject matter recited therein.

Withdrawal of the rejections is respectfully requested.

**New Claims 30-33**

Claims 30-32 have been added and depend from Claim 1, and Claim 33 has been added and depends from Claim 14. The Applicants respectfully submit that these dependent claims are allowable for at least the same reasons Claims 1 and 14, respectively, are allowable, as well as for the additional subject matter recited therein.

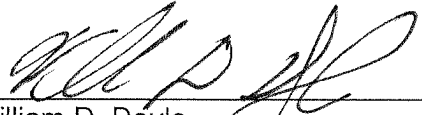
**Conclusion**

In view of the foregoing, Applicants respectfully request reconsideration of the application, withdrawal of the outstanding rejections, allowance of Claims 1-4, 6, 7, 10-18, 21-22 and 24-33, and the prompt issuance of a Notice of Allowability.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing attorney docket number 108907.00043.**

Respectfully submitted,

  
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Enclosure: Declaration under 37 C.F.R. §1.132 of Massimo Malavasi